

**REMARKS/ARGUMENTS**

Claims 1-9 are pending in the present application. No claims are amended, canceled or added herein. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by McCormick (U.S. Patent No. 5,012,722; hereinafter "McCormick"). Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCormick in view of the Wikipedia definition of a PID controller, hereinafter "Wikipedia." Applicants respectfully traverse all rejections and assert that Claims 1-9 are in condition for allowance.

***Claim Rejections - 35 USC § 102***

Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by McCormick.

McCormick teaches a servo valve utilizing a free-floating coil linear force motor driving a hydraulic spool drive and various feedback devices. More specifically, in Figures 1 and 3, McCormick teaches a coil state feedback device 108 used to feedback the position of a LFM coil 54 within an LFM housing (col 5, line 29-31). A valve state feedback device 110 is used to feedback the state of a valve 11 by indicating the position of a spool 44 within a valve housing 42 (col. 5, lines 31-34). Actuator state feedback device 112 may be used to feedback a state of an actuator 106 (col. 5, lines 34-38). McCormick also teaches a feedback signal that is "proportional to the changing peak to peak magnitude of the magnetic field of the LFM coil (54)" (col. 5, lines 64-66). Additionally, McCormick teaches a "voltage feedback signal proportional to the position of core 114, and therefore, also proportional to the position of the valve spool 44 with respect to the valve housing 42" (col. 6, lines 17-20).

However, McCormick fails to teach or suggest sampling feedback signals from an electrohydraulic valve to "create a plurality of signal samples," "transmitting the plurality of samples to an accumulator," and "**averaging** the plurality of samples within the accumulator to create an average value," as recited in Claim 1. Similarly, McCormick fails to teach or suggest "calculating an average current" as recited in Claim 8, or "calculating the amount of average current in the coil" as recited in Claim 9.

Applicant respectfully assert that the methods recited in Claims 1, 8 and 9 is not anticipated by McCormick. Claims 2-7 depend on Claim 1 and recite additional limitations, therefore Applicant asserts that Claims 2-7 are also not anticipated by McCormick. Applicants respectfully assert that the rejection of Claims 1-9 under 35 U.S.C. 102(b) as being anticipated by McCormick is traversed, and that Claims 1-9 are in condition for allowance.

***Claim Rejections - 35 USC § 103***

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCormick in view of Wikipedia. Wikipedia teaches a definition of a PI algorithm as recited in Claim 5 and a conventional PID controller, as recited in Claim 6. However, McCormick fails to teach the method of Claim 1, as discussed above. Thus, creating a plurality of signal samples, transmitting the plurality of samples to an accumulator, and **averageing** the plurality of samples within the accumulator to create an average value, as recited in Claim 1, are not obvious in view of McCormick. The Wikipedia definitions of a PI algorithm and a PID controller do not remedy these deficiencies

in McCormick regarding Claim 1. Claims 5 and 6 are dependent on Claim 1 and recite additional limitations.

Applicants respectfully assert that the rejection of Claims 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over McCormick in view of Wikipedia is traversed, and that Claims 5 and 6 are in condition for allowance.

CONCLUSION

In light of the response presented herein, Applicant respectfully asserts that Claims 1-9 of the present application overcome the rejections of record, and therefore earnestly solicit allowance of these claims.

Applicants have reviewed the references cited but not relied upon. Applicants did not find these references to show or suggest the present claimed invention: U.S. Utility Patent Nos. 5,398,286 and 4,490,841.

If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone the undersigned at 515/558-0200.

No fees or extensions of time are believed to be due in connection with this response. However, consider this a request for any fee or extension inadvertently omitted, and charge any additional fees to Deposit Account 50-2098.

Respectfully submitted,



Timothy J. Zarley  
Reg. No. 45,253  
ZARLEY LAW FIRM, P.L.C.  
Capital Square  
400 Locust Street, Suite 200

Des Moines, IA 50309-2350  
Phone No. (515) 558-0200  
Fax No. (515) 558-7790  
Customer No. 34082  
Attorneys of Record

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